Fetal Pig Dissection Lab

Learning Objectives

• Learn about the anatomy of the pig as an example of a vertebrate mammal
• Identify structures on the pig and know their functions
• Identify structures that are a part of the digestive system, respiratory system, circulatory system, reproductive system, and excretory system
• Compare pig anatomy to human anatomy

Procedure
Access the page "Reading: Fetal Pig Dissection." The pig may or may not be injected with dye. Follow the steps in the handout to view the external pig anatomy.

Questions

1. Based on the external anatomy is your pig male or female? How can you tell?

2. Can you locate any hair on your pig, a common characteristic of mammals? Where is there the most hair?

3. Follow the steps in the handout to cut open the pig beginning with the mouth. Make sure you can locate the following structures in the mouth region:
   a. Glottis
   b. Epiglottis
   c. Hard and soft palate
   d. Pharynx
   e. Trachea
      i. What do the hard and soft palate separate?

4. Cut into the neck region. Make sure you can locate the following structures:
   a. Trachea
   b. Thymus
   c. Thyroid
d. Esophagus
   i. Is the trachea in front of or behind the esophagus?

5. Cut into the thoracic cavity beneath the rib cage. Make sure you can locate the following structures:
   a. Heart
   b. Lungs
   c. Bronchi
   d. Diaphragm
      i. How many chambers does the pig heart have?

      ii. How does the size of the pig lungs compare to the size of the frog lungs you dissected previously?

      iii. What role does the diaphragm play in respiration?

      iv. What cavity contains the lungs?

      v. What cavity contains the heart?

6. Focus next on the abdominal cavity. First look at the digestive system organs. Make sure you can locate the following organs:
   a. Stomach
   b. Spleen
   c. Liver
   d. Gallbladder
   e. Small intestine
   f. Large intestine
   g. Pancreas
      i. What is the function of the liver?

      ii. What is the function of the gallbladder?
iii. What type of digestion occurs in the stomach?

iv. Name the three sections of the small intestines in order.

v. Name one process that occurs in the large intestine.

vi. Which digestive organs located in the abdominal cavity are considered to be accessory organs?

7. Also in the abdominal cavity you will find the excretory system organs. Make sure you can locate:
   a. Kidneys
   b. Bladder

8. Finally in the abdominal cavity are the reproductive organs. If you have a female pig look at another group’s male pig and vice versa. You should be able to find:
   a. Ovary (female)
   b. Uterus with horn (female)
   c. Testes (male)

9. The arteries and veins are challenging to identify, especially if the pig is not injected with dye. Arteries carry blood away from the heart. Veins return blood to the heart. Try to identify the following:
   a. Aorta
   b. Pulmonary artery
   c. Coronary arteries
   d. Jugular vein
   e. Carotid artery
   f. Renal artery
   g. Renal vein
      i. Where does the pulmonary artery transport blood?
      ii. Where does the renal vein transport blood?
10. Skip the brain dissection

11. View the human torso model on your bench. Locate the same organs you found above on the fetal pig.

   a. List three similarities between the pig internal anatomy and human internal anatomy.

   b. List three differences between the pig internal anatomy and human internal anatomy.
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